

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1-9. (canceled)

10. (new): A method of generating a reactive process gas to be used in a subsequent process, the method comprising:

providing gas supply sources which are connected to a gas reaction chamber or chamber system, at least one of said gas supply sources providing a pure molecular halogen gas which is fed directly into the reaction chamber, and introducing gases from said sources into the reaction chamber/chamber system under conditions wherein the gases react to form the reactive process gas which is collected in said reaction chamber/system prior to being fed to the subsequent process.

11. (new): A method according to Claim 10, wherein the subsequent process is carried out in a process chamber or a single or multiple chamber processing tool or tools that are supplied with the reactive process gas via an outlet from said gas reaction chamber or chamber system.

12. (new): A method according to Claim 10 further comprising providing for the localized generation of a reactive process gas.

13. (new): A method according to Claim 10 further comprising providing for the local synthesis of reactive precursors for plasma or non-

plasma processing.

14. (new): A gas generator system adapted to be used in a method of Claim 1, wherein the gas generator system comprises a gas reaction chamber or chamber system having gas inlets so that precursor gas from gas supply sources can be directly introduced into said chamber/chamber system, wherein at least one of the supply sources incorporates a pure molecular halogen gas generator, and wherein the gas reaction chamber or chamber system includes an outlet from which the reactive gas generated in said chamber/chamber system is supplied directly to a process chamber for a subsequent reaction whilst the reactive gas is being generated.

15. (new): A gas generator system according to Claim 14, wherein the outlet includes a valve to control flow of the reactive gas to the subsequent reaction being carried out in the process chamber.

16. (new): A gas generator system according to Claim 14, including control systems with reactive and process chambers, wherein properties of the reactive gas are analyzed either in chamber or as it flows to chamber and, based on the results, reaction parameters in the gas reaction chamber or chamber system are adjusted to achieve predetermined parameters for the reactive gas and/or to control flow to the process chamber.

17. (new): A gas generator system according to Claim 14, wherein the reactive chamber includes one or more electrodes for production of a plasma when precursors reach the chamber.

18. (new): A gas generator system according to Claim 14, wherein the reaction chamber includes a bypass outlet through which a gas produced in said chamber is selectively caused to bypass the process chamber.